

In the Claims

1. (Currently Amended) An electrical connector (1) comprising
  - a cover (2) equipped with at least one first electrical contact (5),
  - a case (3) equipped with at least one second electrical contact (7), and
  - a disconnection device (4) that cooperates with the cover and with the case in order to establish an electrical connection between the first contact and the second contact, which defines a connected state, and in order to bring about a disconnection between the first and the second contact, which defines a disconnected state, characterized in that the electrical connector also comprises
    - a first means of locking (19) that makes it possible to maintain the disconnection device in the connected state,
    - a release (15) that acts on the first means of locking in order to permit the movement of the disconnection device from a connected state to a disconnected state of the first and second contact, and
    - an elastic member (16) placed between the case and the cover, said member being capable of being moved between a first deformed position in the connected state and a second relaxed position in the disconnected state, said elastic member bringing about a separation of the case with respect to the cover, while disconnecting the first contacts from the second contacts when the elastic member changes its position from the deformed position toward the relaxed position when the movement of the disconnection device is triggered by the release.
2. (Original) The connector according to claim 1, further characterized in that the elastic member forms a spring.
3. (Currently Amended) The connector according to one of claims 1 to 2, further characterized in that the first means of locking is an elastic tongue formed at a point on the bottom of the case.

4. (Currently Amended) The connector according to ~~one of~~ claims 1 to 3, further characterized in that the release slides along the peripheral wall of the case and comprises an end (43) intended to be supported against an end (18) of the first means of locking, the first means of locking also cooperating with the disconnection device.

5. (Currently Amended) The connector according to ~~one of~~ claims 1 to 4, further characterized in that the connector is equipped with a Go-nGo system.

6. (Currently Amended) The connector according to ~~one of~~ claims 1 to 5, further characterized in that

- the disconnection device is placed between the case and the cover,
- the elastic member is linked to the case and to the disconnection device.

7. (Currently Amended) The connector according to ~~one of~~ claims 1 to 6, further characterized in that

- the disconnection device comprises a first groove (23) and a second groove (24),
  - the first means of locking comprises an end (18),
  - the device cooperates with the case, while sliding along the first means of locking, going from the state of disconnection in the direction of the state of connection, in such a manner that the end of the first means of locking is positioned in the first groove and then in such a manner that the end of the first means of locking is supported against the second groove.

8. (Original) The connector according to claim 7, further characterized in that the first means of locking is moved by a height necessary for being dislodged from the second groove.

9. (Currently Amended) The connector according to ~~one of claims 1 to 8~~, further characterized in that the disconnection device is recessed by a groove (24) comprising a shape that is adapted to the shape of the end (18) of the first means of locking.

10. (Currently Amended) The connector according to ~~one of claims 1 to 9~~, further characterized in that the elastic member extends by a length (45) corresponding to at least the length (52) of the first contact.

11. (Currently Amended) The connector according to ~~one of claims 1 to 10~~, further characterized in that it comprises a secondary means of locking (100) of the first means of locking (19) that is capable of being moved between a blocking position of the first means of locking (19) and a freeing position of the first means of locking (19), it being necessary to maneuver this secondary means of locking from the blocking position toward the freeing position so that the first means of blocking can be actuated by the release.

12. (Currently Amended) The connector according to claim 11, further characterized in that it comprises a support wall (109), the secondary means of locking comprising a support (101), which, in the blocking position of the first means of blocking, inserts between the first means of locking and the support wall so as to block the movement of the first means of locking.

13. (Currently Amended) The connector according to ~~one of claims 11 to 12~~, further characterized in that the secondary means of locking comprises a first detent means (111), which opposes the movement of the secondary means of locking toward the freeing position when the latter is in the blocking position of the first means of blocking.

14. (Currently Amended) The connector according to claim 13, further characterized in that it comprises a notch (104) and in that the first detent means forms a boss (111) that is capable of being inserted elastically into the notch (104).

15. (Currently Amended) The connector according to claim 14, further characterized in that the boss and the notch comprise, respectively, a first surface (105) and a second surface (106), while abutting against each other, the first surface and the second surface being each formed in a plane perpendicular to a direction of movement of the secondary means of locking.

16. (Currently Amended) The connector according to ~~one of~~ claims 11 to 15, further characterized in that the secondary means of locking comprises a support (101), an elastic arm (102), and a hook (103), the arm linking the support to the hook and the hook bearing a first detent means (111), which opposes the movement of the secondary means of locking.

17. (Currently Amended) The connector according to ~~one of~~ claims 11 to 16, further characterized in that the secondary means of locking comprises a second detent means (107) that maintains the secondary means of locking in the position freeing the first means of locking.

18. (Currently Amended) A process for the electrical connection of an electrical connection comprising

- a cover (2) equipped with at least one first electrical contact (5),
- a case (3) equipped with at least one second electrical contact (7), and
- a disconnection device (4) that cooperates with the cover and with the case in order to establish an electrical connection between the first contact and the second contact, which defines a connected state, and in order to bring about

a disconnection between the first and the second contact, which defines a disconnected state, characterized in that it includes the following step

- the disconnection device is inserted into the case from a front face (11) in the direction of a back face (12) of the case until the device slides along a first means of locking (19) from a first groove (23) to a second groove (24), the first groove and the second groove being recessed in the disconnection device.

19. (Currently Amended) A process for electrical disconnection of an electrical connector comprising

- a cover (2) equipped with at least one first electrical contact (5),  
- a case (3) equipped with at least one second electrical contact (7), and  
- a disconnection device (4) that cooperates with the cover and with the case in order to establish an electrical connection between the first contact and the second contact, which defines a connected state, and in order to bring about a disconnection between the first and the second contact, which defines a disconnected state, characterized in that it includes the following step

- a release (15) is moved in order to dislodge from a groove (23, 24) recessed in the disconnection device a first means of locking (19) by at least at height (50, 51) corresponding to the depth of said groove.